

**Replay to:**

**ISA Search Report & ISA Written Opinion dated 17/June/2005**

As it is explained below the ISA Written Opinion does not recognize most basic common feature of all prior art filters and consequently produces incorrect opinions such as that provided in the 1st sentence of & 1.0 of Sec. II on page 3 of PCT/ISA/237 ("the preamble (lines 1-9) however contains basic and trivial implementation details that would have been obvious to a person skilled in the art and are not considered inventive").

1. While all prior art filters for serial data links are noise filtering amplitude detectors; this invention introduces "noise filtering edge detector (NFED)" (clearly defined as such in the preamble's title, claim 1 & other claims texts, and the specification). Therefore this invention NFED has fundamentally different principle of operation than all prior art filters, which is fundamentally superior as well when applied to any recovery of digitally transmitted data.

As it is obvious to all skilled in the art; all prior art filters for serial links are such noise filtering amplitude detectors, since they detect filtered signal amplitudes occurring at digital sampling (or analog sensing) time instances in order to produce filtered output signals.

However; contemporary communication methods are based on FM, PM, or NRZ/PAM over copper/fiber which use signal transitions between limited set of discrete levels and transitions phases as the means for data encoding.

All digitally transmitted data can be recovered entirely when such signal transmitting transitions and their phases are known. Since all original signal amplitudes between two transitions shall be expected to be equal to or defined by the final level reached by the last transition, there is no need to detect (calculate) filtered signal amplitude for time instances occurring between said transitions.

Since this invention NFEDs detect filtered signal edges (transitions) occurring at certain sampling instances only while an ideal signal shape is assumed elsewhere, NFED principle of operation is fundamentally different than that of all prior art filters. Furthermore; since NFED focuses entirely on recovery of relevant elements of signal only, its unique principle of operation enables fundamentally superior receivers of digitally transmitted data compared to those using prior art filters.

Since the first sentence fails to recognize such essential differences and contributions over prior art, it is totally incorrect.

2. Instead of identifying differences and evaluating contributions over prior, said &1 applies obviously defective method limited to a search for similarities only and uses resulting insufficient allegations to justify incorrect written opinion. Resulting unjustified negative adjectives are placed in the most visible top &1 of the written opinion, where they may cause negative prejudice having negative influence on examination processes in designated national offices.

The ISA opinion failed to recognize that the only relevant method of verifying inventiveness is to identify contributions by evaluating differences between new

solution and prior art. It is particularly true in such matured already field as electrical circuits. It is obvious that for any new electrical circuit solution, no matter how inventive it may be, multiple major similarities can be found within multiple prior art solutions.

Contrary to that, said &1 is totally limited to a search of superficial similarities used to bypass essential differences and contributions such as those explained above or fundamentally different function and result of D2 (D2 recovers parallel image data and provides motion compensation while NFED recovers single electrical signal from serial communication link).

The applicant feels that such incompetent and incorrect ISA opinion placed in the most visible 1<sup>st</sup> sentence has to be clarified conclusively, in order to prevent any negative prejudice which may needlessly complicate further application prosecution in national offices.

Since the priority claiming original application (CA 2,453,292) has been filed only one week after the publication of the PCT/CA2003/000909 (which ISA applies as prior art document D1=WO2004/002052) and this application is declared as Continuation In Part of the D1; such D1 document most crucial for ISA questioning of claim1 inventiveness, can not be applicable as prior art in the US Patent Office recognizing the first to invent principle.

Furthermore the original description and claims from PCT/CA04/000017 have been significantly upgraded:

1. References to the Sec.2 of the SUMMARY OF THE INVENTION, from the parent D1=WO2004/002052, have been eliminated; by including said Sec.2 from D1 into this NFED application under the name GENERAL DESCRIPTION OF INVENTION COMPONENTS, and by replacing said references to the parent application with references to the GENERAL DESCRIPTION OF INVENTION COMPONENTS in this Continuation In Part NFED application.
2. Text of PCT application claims has been included into the new SUMMARY OF THE INVENTION, and new more definite claims have been constructed and included herein.

## **Conclusion**

Based on the application improvements and the above clarifications, it is thus respectfully submitted that the invention taught and defined herein by the claims embodies patentable subject matter.

The Examiner is earnestly solicited to give favorable consideration to this application and pass it to allowance.

Respectfully submitted,

By: John W. Bogdan\_